DOCUMENT RESUME

ED 164 473 SP 013 366

AUTHOR Thompson, L. J.
TITLE A Survey of Reinforcement Preferences. Research Bulletin Number 3.
INSTITUTION Churchlands Coll. of Advanced Education (Australia).
PUB DATE 78
NOTE 74p.; Light type may not reproduce clearly

EDRS PRICE MF-$0.83 HC-$3.50 Plus Postage.
DESCRIPTORS Academic Achievement; Behavior Change; *Elementary Education; Foreign Countries; Learning Motivation; *Motivation Techniques; Performance Factors; *Positive Reinforcement; Reinforcement; *Student Attitudes; *Teacher Attitudes
IDENTIFIERS Australia

ABSTRACT

The question examined by this study was: Are the traditional reinforcers common to many planned programs of reinforcement in the classroom relevant and meaningful to the pupils themselves? Data is reported from a questionnaire administered to seven-year-old pupils, ten-year-old pupils, and their teachers. A discrepancy was found between reward preferences of the pupil samples and those of the teacher samples. Age and attainment level were found to be significant variables related to pupils' reward preferences. Ten-year-old pupils placed more emphasis on nontangible reinforcers than did seven-year-old pupils. Ten-year-old pupils of high attainment level placed greater emphasis on nontangible reinforcers than did ten-year-old pupils of low attainment level. Possible explanations and implications of the findings are discussed in this report. (Author/JD)

**********
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
**********

ED164473

RESEARCH BULLETIN NUMBER 3

# A SURVEY OF REINFORCEMENT PREFERENCES

L.J. Thompson

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
NATIONAL INSTITUTE OF EDUCATION

THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL NATIONAL INSTITUTE OF EDUCATION POSITION OR POLICY

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY

L.J. Thompson

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC) AND USERS OF THE ERIC SYSTEM."

SP013366

RB 3

ISSN 0313-993X
ISBN 909360 25 1

*SERIES EDITOR: Milton L. Clark*

This Bulletin is produced for limited distribution.
It is automatically superseded upon formal publication
of the material.

Printed and distributed by CHURCHLANDS COLLEGE OF ADVANCED EDUCATION
Pearson Street, Churchlands, Western Australia, 6018.

1978.

## *ABSTRACT*

*The key question examined by this study is:*

> *Are the 'traditional reinforcers' common to many planned programmes of reinforcement in the classroom relevant and meaningful to the pupils themselves?*

*Data is reported from a questionnaire administered to 300 seven year old pupils, 400 ten year old pupils, 100 classroom teachers of seven year old pupils, 100 classroom teachers of ten year old pupils selected from primary schools situated in the Perth metropolitan area. A discrepancy was found between reward preferences of the pupil samples and those of the teacher samples. Age and attainment level were found to be significant variables related to pupil's reward preferences. Ten year old pupils placed more emphasis on non tangible reinforcers than did seven year old pupils. Ten year old pupils of high attainment level placed greater emphasis on non tangible reinforcers than did ten year old pupils of low attainment level. Possible explanations and implications of the findings are discussed.*

*ACKNOWLEDGEMENTS*

The assistance of the following persons in collecting and processing the data reported for this survey is gratefully acknowledged.

| | |
|---|---|
| Phillip | Green |
| Lorraine | Green |
| Kathy | Huxtable |
| Christine | Lowe |
| Anne | Markey |
| Lucia | Maslin |
| Jennifer | Parlane |
| Alma | Ratajizah |
| Glenda | Spedding |
| Anne | Sutton |
| Anne | Vidivich |

## *TABLE OF CONTENTS*


| | | Page |
|---|---|---|
| | Abstract | i |
| | Acknowledgements | ii |
| | List of Figures and Appendices | iv |
| 1.0 | Introduction | 1 |
| 2.0 | Aims of the Survey | 6 |
| 3.0 | Hypotheses to be tested | 7 |
| 4.0 | Operational Definitions | 7 |
| 5.0 | Sampling | 8 |
| 6.0 | Methods and Procedures Used | 9 |
| 7.0 | Problems Experienced with the Administration of the Survey | 11 |
| 8.0 | Results of the Survey | 12 |
| 9.0 | Conclusions | 22 |
| 10.0 | Bibliography | 29 |
| | Appendices | 30 |

## *LIST OF FIGURES & APPENDICES*


*Figures*

| | | *Page* |
|---|---|---|
| 1 | A Hierarchy of Reinforcers Proposed | 4 |
| 2 | A Reinforcement Hierarchy | 5 |
| 3 | Reward Preferences of Seven Year Old Males and Females | 14 |
| 4 | Reward Preferences of Seven Year Old Pupils According to Attainment Level | 15 |
| 5 | Teacher-Pupil Reward Preferences: Seven Year Olds | 17 |
| 6 | Reward Preferences: Seven Year Old Pupils and Ten Year Old Pupils | 18 |
| 7 | Reward Preferences of Ten Year Old Males and Females | 20 |
| 8 | Reward Preferences of Ten Year Old Pupils According to Attainment Level | 21 |
| 9 | Teacher-Pupil Reward Preferences: Ten Year Olds , | 23 |

*Appendices*

| | | |
|---|---|---|
| 1 | Data Sheet One and Two | 31 |
| 2a | Letter to Principals | 32 |
| 2b | Questionnaire | 34 |
| 3 | Tables of results 1-10 | 35 |
| 4 | A List of Specific Reward Suggestions | 45 |
| 5 | A List of Teacher Comments | 48 |

# A SURVEY OF REINFORCEMENT PREFERENCES

*L.J. Thompson*

## 1.0 INTRODUCTION

Anyone who visits the primary school classroom in 1977 will observe that many teachers are implementing planned programmes of reinforcement. Behaviour modification programmes, contingency contracting, 'token-economies' are increasingly becoming features of a normal classroom programme. However, one would also observe that although more primary teachers are implementing planned programmes of reinforcement, the actual reinforcers being used are much the same as they always have been. Ticks, stamps, stars, prevalent in most classroom programmes of reinforcement today have been used as reinforcers from almost the very first days of formalized classroom teaching. Teachers continue to rely heavily on; written and verbal praise, displaying children's good work, sending a child to the headmaster or another teacher for praise, sending home a good report to the child's parents. It is this use of 'traditional reinforcers' that provides a focus for the study reported in the following pages.

A basic assumption in this study is that if reinforcement is to be of value in motivating academic and non-academic learning in the classroom above all else it must be both relevant and meaningful to the individual pupils concerned (Skinner, 1964). It must be relevant to the child's needs and meaningful to his particular values, attitudes and interests. The more relevant and meaningful the reinforcement is for an individual pupil, the more intense and sustained is his performance likely to be. The more he is likely to perform to capacity. The more relevant and meaningful the reinforcement offered, the more relevant and meaningful the learning experience itself is likely to become. These assumptions require empirical validation. It is the purpose of this study to establish

preliminary base-lines in terms of students' preferences for reinforcers.

The popular practice of using 'traditional reinforcers' such as stamps, ticks and stars for all children in a class and all classes within a school presupposes that all children consider them relevant and meaningful. Such a practice presupposes that the relevance and meaningfulness of a reinforcer will not be influenced by such variables as a child's age, sex, school attainment level or interests. Obviously such supposition is contradictory to all educational theory related to the significance of individual differences. It would seem that many reinforcers being used are those that the teacher himself considers relevant and meaningful and those that he finds convenient and easy to administer.

It is suggested that many teachers place considerable emphasis on intrinsic non-tangible reinforcers, when implementing planned programmes of reinforcement. It is necessary to check the veracity of this observation however, and this is an important objective of the study reported here.

Many teachers express considerable doubt and reservation about the use of tangible reinforcers. Comments such as the following are often expressed:

> Offering a child a sweetie for good work or behaviour is nothing more than a crude form of bribery;
>
> Children should be encouraged to learn because of the intrinsic feelings of satisfaction and accomplishment the learning task has to offer, not by the promise of some tangible reward;
>
> If I reward a child with a tangible reward now, won't I be encouraging him to expect rewards for everything he does as he goes through life?

It may be that reservations and doubts such as those expressed above partly explain the continued emphasis teachers give to 'traditional reinforcers' when implementing planned programmes of reinforcement. There is considerable evidence which supports the notion that tangible reinforcers are relevant and meaningful to many children and are effective in encouraging maximum performance. A child who

is experiencing considerable difficulty with a particular learning task is likely to receive little positive reinforcement from intrinsic, self-generated rewards associated with the learning task. Due to the difficulty he is experiencing with the learning task such a child is likely to experience anxiety, 'a sense of failure' and consequently the learning task itself is initially aversive for him. It is assumed for such a child the most relevant and meaningful reinforcers would be extrinsic-tangible rewards. Further, as his mastery of a learning task increases the value of the intrinsic, non-tangible rewards increases also. Only when specific problems associated with the learning task have been eliminated is it likely that the carrying out of the learning task itself provides the child with meaningful reinforcement.

In commenting on the use of extrinsic reinforcers, Smith (1975) has stated:

> Although extrinsic reinforcers are shunned by some people as artificial, you can use extrinsic reinforcers to condition intrinsic ones... That is, if you present extrinsic reinforcers after a response, then other things that naturally result from the response become associated with the extrinsic reinforcer and may become reinforcing themselves. (p.225)

More recently there has been a school of thought (Forness, 1973) which suggests that reinforcer categories form hierarchies with intrinsic, non-tangible reinforcers such as competence at the top and extrinsic, tangible reinforcers such as edibles at the base. In such schemes the effectiveness of rewards is related to the competency of an individual child's performance. The rewards higher up the hierarchy are considered the more mature in developmental terms. This is illustrated in Figures 1 and 2.

FIGURE 1 : A HIERARCHY OF REINFORCERS PROPOSED

Adapted from Forness, S.R. *The Reinforcement Hierarchy*, Psychology in the Schools, 1973, cited by K.D. Ballard, *Reinforcement and its Overkill*, National Education, Government Printers, Wellington, April 1st, 1976. pp.55-59.

| |
|---|
| COMPETENCE: A sense of mastering. The enjoyment of solving a problem, acquiring a skill or completing a task. |
| BEING CORRECT: A feeling of success, often associated with social approval. |
| SOCIAL APPROVAL: From teacher, parent or peers. |
| CONTINGENT ACTIVITY: So much time spent on a less preferred activity (e.g., mathematics problems) can be exchanged for time on a preferred activity (e.g., painting). |
| TOKENS OR CHECK MARKS: These can be exchanged for other items such as time on other activities or for tangibles. |
| TANGIBLES: Toys, trinkets, pencils, etc. |
| EDIBLES: Sweeties, peanuts, chippies, etc. |

FIGURE 2 : A REINFORCEMENT HIERARCHY

Suggested by Neisworth J.T. and Smith R.M. *Modifying Retarded Behaviour*. Boston: Houghton Mifflin Company, 1973. p.87.

SELF-GENERATED REINFORCERS: Satisfaction with a job well done etc.

SELF MANAGEMENT OF TANGIBLE REINFORCERS: Allowing yourself to watch television only after you've completed an unpleasant chore.

SOCIAL APPROVAL: Attention.

MANAGEMENT OF TANGIBLE REINFORCERS: Tokens, trinkets, food, water, by others.

Neisworth and Smith emphasize that selection of reinforcers from the reinforcement hierarchy should not be a haphazard task. They have offered the following principles which classroom teachers should give due consideration when selecting from the reinforcement hierarchy:

1. The reinforcers you use will depend on the children you are working with and the availability and practicality of various items and activities. In general you should try to use reinforcers as high in the hierarchy as possible and revert to basic reinforcers only if the higher ones are unsuccessful.

2. Try to gear reinforcers to the performance level of the individual child.

3. You should not assume that a given child should never be reinforced with tangibles because he has reached a level where social approval is effective.

4. Within the repertoire of any person are behaviours that require different levels and types of reinforcers.

The Key question raised in the preceeding corment is:

*Are the 'traditional reinforcers' common to many planned programmes of reinforcement in the classroom relevant and meaningful to the pupils themselves?*

It is this question which provided the main purpose for this study. On the basis of information obtained in response to this question, we hoped to make some cautious predictions about the probable effectiveness of such reinforcers in planned reinforcement programmes. To obtain the necessary information it was decided to carry out a survey of reinforcement preferences in classrooms for seven and ten year old children attending primary schools in the Perth metropolitan area. The main aim of the survey was to compare the emphasis given by teachers to the use of tangible and non-tangible reinforcers with the emphasis given to the same reinforcers by the children themselves.

## 2.0 AIMS OF THE SURVEY

- To collect and categorize the reward preferences given by a sample of seven year old children and a sample of ten year old children.
- To collect and categorize the reward preferences given by a sample of practicing teachers involved with seven year old children and a sample of practicing teachers involved with ten year old children.
- To compare the reward preferences given by the seven and ten year old pupils with those given by the practicing teachers in an attempt to determine the relevancy and meaningfulness of reinforcers currently being employed in the normal classroom.
- To isolate for analysis some of the variables which might influence seven and ten year old pupils' reward preferences. Specifically the survey aims to examine the influence of school attainment level and sex on reward selection.

## 3.0 HYPOTHESES TO BE TESTED

*H1: There is no relationship between teachers use of reinforcers and students preferences for reinforcers.*

*H2: There is a relationship between a child's attainment level and his preference for reinforcers.*

*H3: There is no relationship between a child's sex and preference for reinforcers.*

## 4.0 OPERATIONAL DEFINITIONS

### 4.1 Contingencies of Reinforcement

For purposes of this survey the following definition offered by Skinner (1964) was used:

(Contingencies of Reinforcement are)

> The relations which prevail between behaviour on the one hand and the consequences of that behaviour on the other with the result that a much more effective control of behaviour has been achieved. (p.142)

### 4.2 Reinforcers

#### 4.2.1 Reinforcer: General

The general definition of a reinforcer utilized in this study was that offered by Homme (1970):

> A reinforcer in psychology is an event which when it follows certain activities increases the likelihood that these activities will recur. (p.10)

#### 4.2.2 Reinforcer: Specific

The specific definition of a reinforcer utilized in this study was:

> Rewards given by a teacher to a seven year old child or a ten year old child for having written an excellent story in class.

### 4.3 School Attainment Level

School attainment level for purposes of this survey was defined in terms of a child's overall standing in class from an academic achievement point of view. Teachers were asked to assess their children's achievement levels in reading, spelling, written expression and mathematics and on the basis of such

assessment to assign each child an overall attainment grade. Teachers were asked to grade each child's school attainment level according to the following scale:-

A = Outstanding academic attainment
B = Good academic attainment
C = Average academic attainment
D = Below average academic attainment
E = Minimal academic attainment

## 5.0 SAMPLING

5.1 *PUPILS* involved in this survey were drawn from eight different schools and were selected randomly from classrooms by their teachers. Teachers were asked to place all female pupil's names in a box and all male pupil's names in a separate box. Each teacher was then asked to select 15 names from each box. Two different samples were drawn:

*SAMPLE A* comprised of 300 seven year old pupils (150 males and 150 females) selected randomly from eight different schools. Complete data for analysis was collected for 135 female and 146 male pupils in this sample.

*SAMPLE B* comprised of 400 ten year old pupils (200 males and 200 females) selected randomly from eight different schools. Complete data for analysis was collected for 190 females and 169 male pupils in this sample.

5.2 *CLASSROOM TEACHERS* involved in this survey were selected by their Principals. Principals were asked to invite current teachers of seven year old pupils and ten year old pupils to participate in a survey. Two samples of teachers were thus available:

*SAMPLE 1* comprised of 75 classroom teachers currently engaged in teaching seven year old pupils. The teachers were selected from 40 different schools.

*SAMPLE 2* comprised of 75 classroom teachers currently engaged in teaching 10 year old pupils. The teachers were selected from 40 different schools.

5.3 *SCHOOLS* *Pupils* involved in this survey were drawn from eight different class 1A primary schools situated in the Perth metropolitan area. These schools were situated in the following Perth districts: Woodlands, City Beach, Balga,

North Beach, Doubleview, Bentley, Girrawheen and Morley.

*Teachers* involved in this survey were drawn from 40 different class 1A primary schools situated in the Perth metropolitan area.

## 6.0 METHODS AND PROCEDURES USED

6.1 (a) A team of ten second year students attending Churchlands College of Advanced Education who were studying the Psychology core course, interviewed 300 seven year old pupils and 400 ten year old pupils selected from primary schools situated in the Perth metropolitan area. (Incomplete data collection reduced these samples of pupils to the number indicated in Section 5.1).

(b) The pupils were asked to name the five rewards they would most like to receive from their teacher for writing a good story. They were asked to rank their reward selections in descending order from 1 to 5.

(c) The team of data collectors were instructed to use the following dialogue when collecting the required data from the pupils:

> *Hello, my name is ..... I would like you to think about something for a few moments. You have just written a very good story and your teacher wants to reward you. Can you think of 5 rewards you would like to receive for having written the story. If it was possible for your teacher to give it to you, what would you like as your first reward? What would you like to receive as your second reward? third reward? fourth reward? fifth reward?*

(d) Two standardized data collecting sheets were constructed for purposes of recording information given by the seven and ten year old pupils. (See Appendix 1).

(e) The team of data collectors sought information about each child's school attainment level from their classroom teacher. (See operational definition in section 4.3).

6.2 A standardized letter containing a Questionnaire was posted to 100 classroom teachers of seven year old pupils and to 100 classroom teachers of ten year old pupils, teaching in schools situated within the Perth metropolitan area. The Questionnaire required each teacher to rank in descending order of preference, 5 rewards they would give a child in their class for having written a good story. (See Appendix 2, (A) and (B).)

6.3 The "reinforcement hierarchy" suggested by Forness (1973) was used as a guide when selecting the categories to collate the reward preferences. The following categories were chosen:-

*SOCIAL APPROVAL* : Recognition of achievement by principal, parents, peers. Achievement acknowledged at school assembly.

*DISPLAY OF WORK* : Work displayed on class display board, in school library show case. Work shown to another class.

*VERBAL NON-VERBAL PRAISE* : Written or verbal comments praising work, given by teacher, principal.

*CONTINGENT ACTIVITY* : Allowed to spend a specified amount of time on a preferred activity e.g. sport, games, reading, art-craft.

*SPECIAL DUTIES* : Child given special class responsibility, duty as a reward for good work, eg. taking lunch orders, taking messages to principal.

*TOKENS* : These can be exchanged for pre-determined tangibles.

*STAMPS, TICKS, STARS*

*CHOICE OF DESK PARTNERS* : Children allowed to choose who they sit with as a reward for good work.

*TIME OFF* : Pupils allowed to go out to recess early or leave for home early.

*STATIONERY* : Children presented with pencils, rubbers, notebooks, etc., as a reward for good work.

*GIFTS* : Toys, books, small presents, given as a reward for good work.

*EDIBLES* : Peanuts, sweets, chippies, fruit, given as a reward for good work.

6.4 Frequency Distribution Tables were compiled to record

a) Seven year old pupils' rankings of reward preferences.

b) Seven year old male pupils' rankings of reward preferences.

c) Seven year old female pupils' rankings of reward preferences.

d) Seven year old pupils' rankings of reward preferences according to attainment levels.

e) Ten year old pupils' rankings of reward preferences.

f) Ten year old male pupils' rankings of reward preferences.

g) Ten year old female pupils' rankings of rewardpreferences.

h) Ten year old pupils' rankings of reward preferences according to attainment levels.

i) Rankings of reward preferences by teachers of seven year olds.

j) Rankings of reward preferences by teachers of ten year olds.

## 7.0 PROBLEMS EXPERIENCED WITH THE ADMINISTRATION OF THE SURVEY

7.1 The Attainment Level Classifications used in this survey must be regarded with caution. Many classroom teachers had no objective measures for academic attainment of their pupils available and their assessments were based on subjective observations only.

7.2 The data collectors reported that the 'Standardized dialogue' designed for use while interviewing the pupil sample was in some situations inadequate. This was particularly so with the seven year old pupils with reference to the term 'reward'. Many seven year old children associated this word with the concept of 'prize' as in winning a prize in a race, and their choice of reward preference was influenced by this.

7.3 The data collectors noted that there appeared to be a degree of artificiality in the reward choices offered by some of the children. Asking a child what he would like as a reward when at the time of asking he was not actually in the running for a reward was a fairly artificial situation. It was a little like asking a child what he'd like for his birthday 12 months hence.

7.4 It was felt that many of the reward preferences offered by the pupils were those that already existed as a part of their normal classroom programme and it was difficult for the children to think beyond them. This was particularly so with ticks, stamps and stars etc.

## 8.0 RESULTS OF THE SURVEY

In the tables presented in Appendix 3 the two measures, 'frequency rankings' and 'rankings according to the pupils' first and second preferences' are key concepts to the understanding of the tables. Frequency rankings refers to the ranking of a reinforcer category according to the total number of preferences it was given. Ranking according to the pupils' first and second preferences refers to the ranking of a reinforcer category according to the sum of the first and second preferences it was given. In the tables related to seven and ten year olds reward preferences according to the school attainment level, frequency rankings refer to the number of first preferences only, given to a reinforcement category.

Samples of specific reward suggestions offered by teachers and pupils is presented in Appendix 4. Teachers comments about reinforcers are summarised in Appendix 5.

### 8.1 Reward Preferences of seven year old pupils

The data provided by the sample of seven year old pupils (Appendix 3, Table 1) indicated that greater preference was expressed for tangible rewards. This was indicated both by frequency rankings and rankings according to the pupils' first and second preferences. The sample indicated that

Gifts were the most desired reward followed in order of preference by Stamps-ticks-stars, Contingent Activity and Edibles. The non-tangible rewards of Social Approval, Display of Work and Verbal-non verbal Praise were ranked fifth, equal ninth and eighth respectively.

8.2 Reward Preferences of seven year old males and females

The data provided by the sample of seven year old pupils (Appendix 3, Tables 2 & 3) suggested that there are few significant differences between seven year old male and female reward preferences. (See Figure 3). The male sample ranked Gifts as their most desired reward (according to first and second preferences) followed by Stamps-ticks-stars, Edibles and Social Approval. The female sample ranked Stamps-ticks-stars as their most desired reward (according to first and second preferences) followed by Gifts, Contingent Activity and Social Approval.

8.3 Reward Preferences of seven year old pupils according to School Attainment Level

The data provided by the sample of seven year old pupils (Appendix 3, Table 4) suggested that although attainment level had some influence on seven year old children's choice of reward preferences such influence was fairly minimal. Stamps-ticks-stars, were ranked first in order of preference, according to first preference frequency only, by children of A,B,C & D attainment levels. (See Figure 4). Children of A attainment level however placed equal emphasis on the reinforcer category Contingent Activity. Children of E attainment level ranked Gifts as their most desired reward. Children of B, C & D attainment levels ranked Gifts second while none of the children of A attainment level ranked gifts as a first preference. Social Approval was ranked third in preference by all attainment levels.

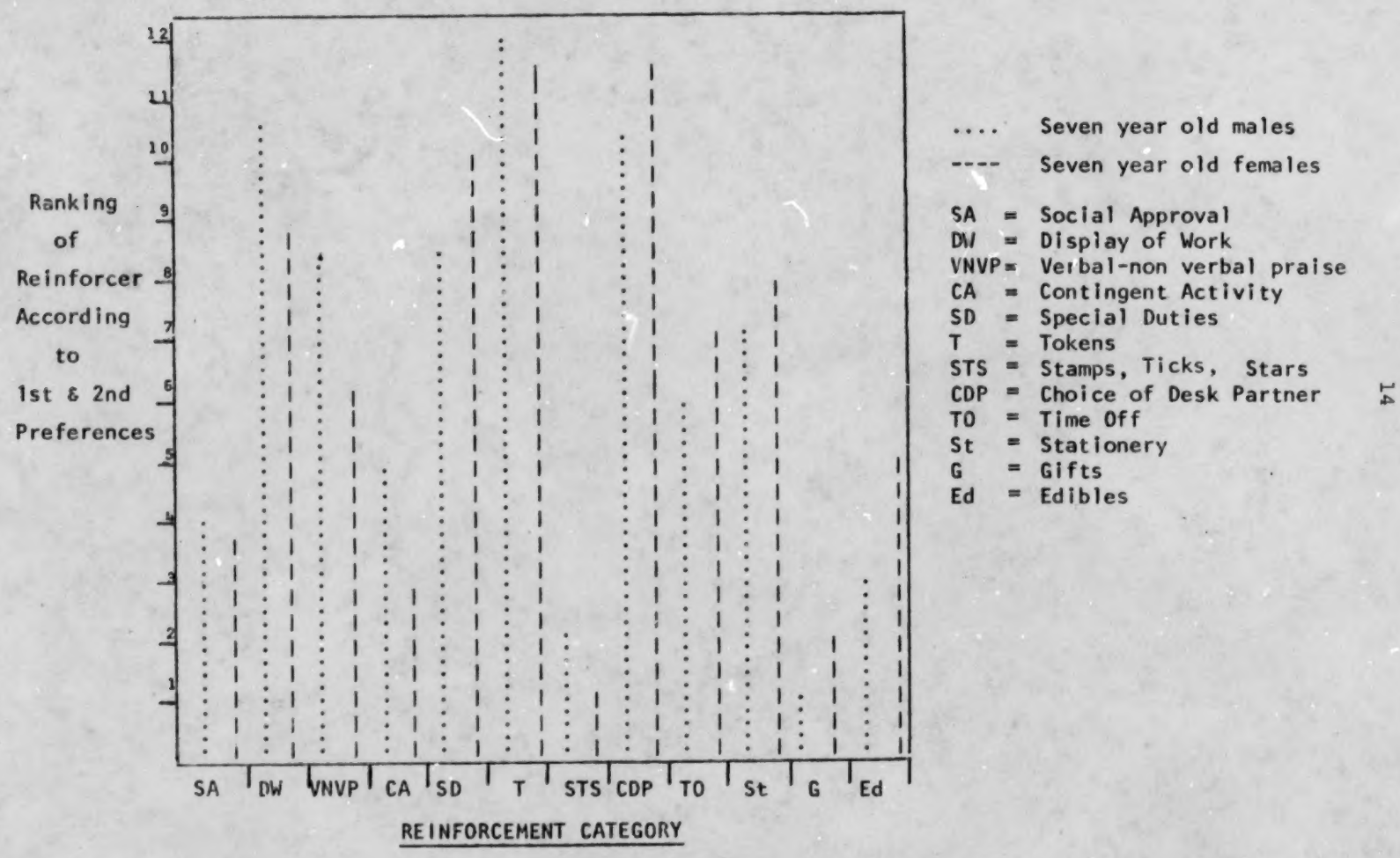


*FIGURE THREE: REWARD PREFERENCES OF SEVEN YEAR OLD MALES AND FEMALES*

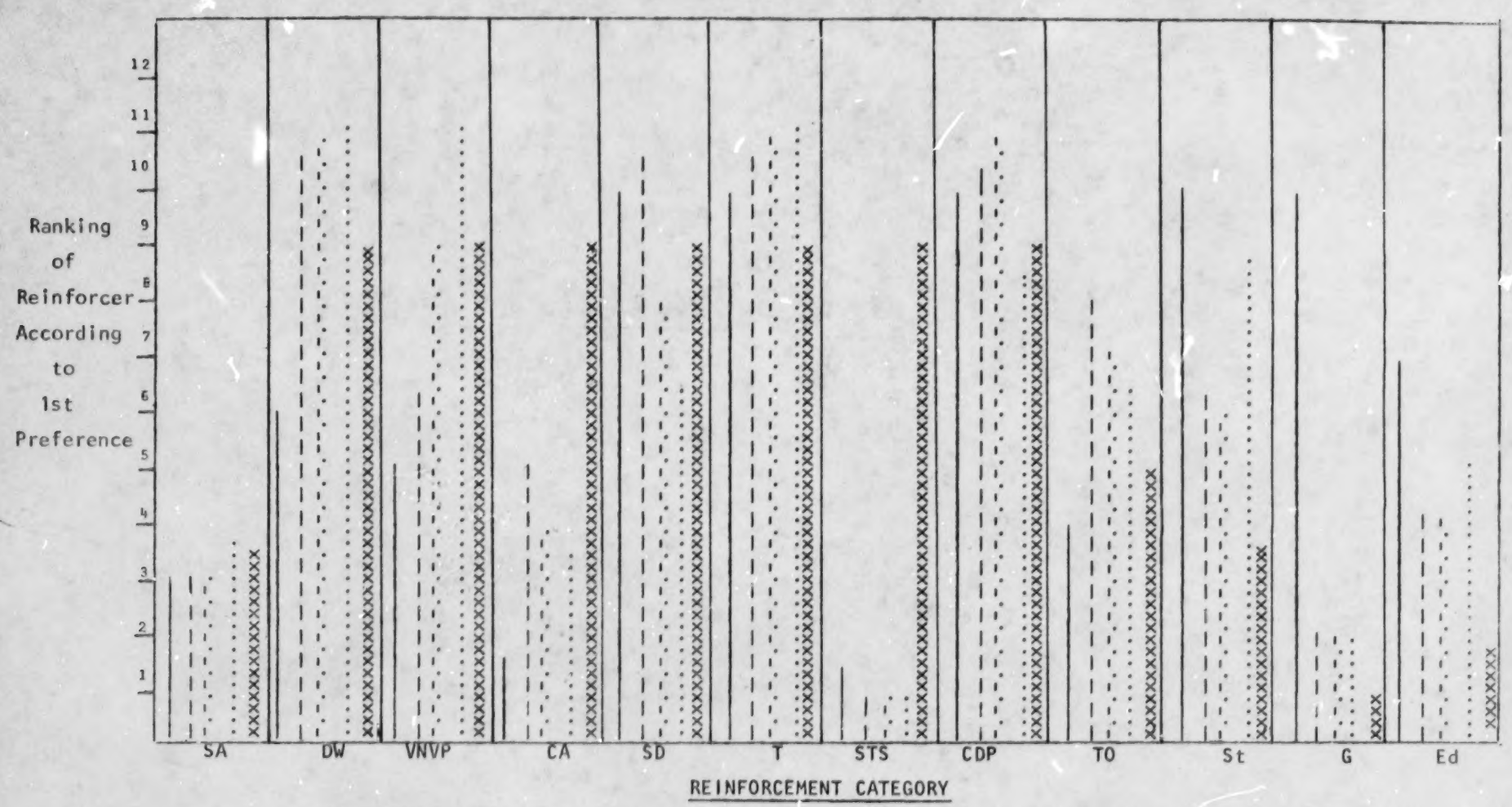


*FIGURE FOUR: REWARD PREFERENCES OF SEVEN YEAR OLD PUPILS ACCORDING TO ATTAINMENT LEVEL*

____ A attainment level
_ _ B attainment level
-.-.C attainment level
.... D attainment level
xxx E attainment level

SA = Social Approval
DW = Display of Work
VNVP = Verbal-non verbal praise
CA = Contingent Activity
SD = Special Duties
T = Tokens
STS = Stamps, Ticks, Stars
CDP = Choice of Desk Partners
TO = Time Off
St = Stationery
G = Gifts
Ed = Edibles

8.4 Teacher Reward Preferences for seven year old pupils

The data provided by the sample of teachers of seven year olds (Appendix 3, Table 5) indicated that they placed most emphasis on non-tangible reinforcers. The sample indicated that the reinforcer category Display of Work was the reward they most preferred to use. This was followed by Social Approval, Stamps-ticks-stars, and Verbal-non verbal praise respectively. (See Figure 5). Whereas the sample of seven year old pupils ranked the reinforcer Gifts as their first preference, the sample of teachers ranked it as sixth. The reinforcer Display of Work was ranked ninth by the sample of sever year old pupils.

8.5 Reward Preferences of ten year old pupils

The data provided by the sample of ten year old pupils (Appendix 3, Table 6) indicated that their reinforcement preferences were fairly evenly distributed between tangible and non tangible rewards.

The sample indicated that the reinforcer Contingent Activity, in terms of frequency ranking and rankings according to first and second preferences, was the most desired reward. This was followed in order of preference, according to first and second preference rankings, by Social Approval, Gifts, Stationery and Time-off. (See Figure 6).

The data collected gives some indication that ten year old pupils place more significance on non-tangible reinforcers than do seven year olds. The sample of seven year old pupils ranked the reinforcer Contingent Activity third and the reinforcer Social Approval fifth. Gifts were ranked first in preference by the seven year old pupils and third by the ten year old pupils.

8.6 Reward Preferences of ten year old males and females

Although the data provided by the sample of ten year olds (Appendix 3, Tables 7&8) indicated that both male and female pupils ranked the reinforcer Contingent Activity, as their first preference, there were significant differences in the other rankings. The ten year old males ranked gifts as their second

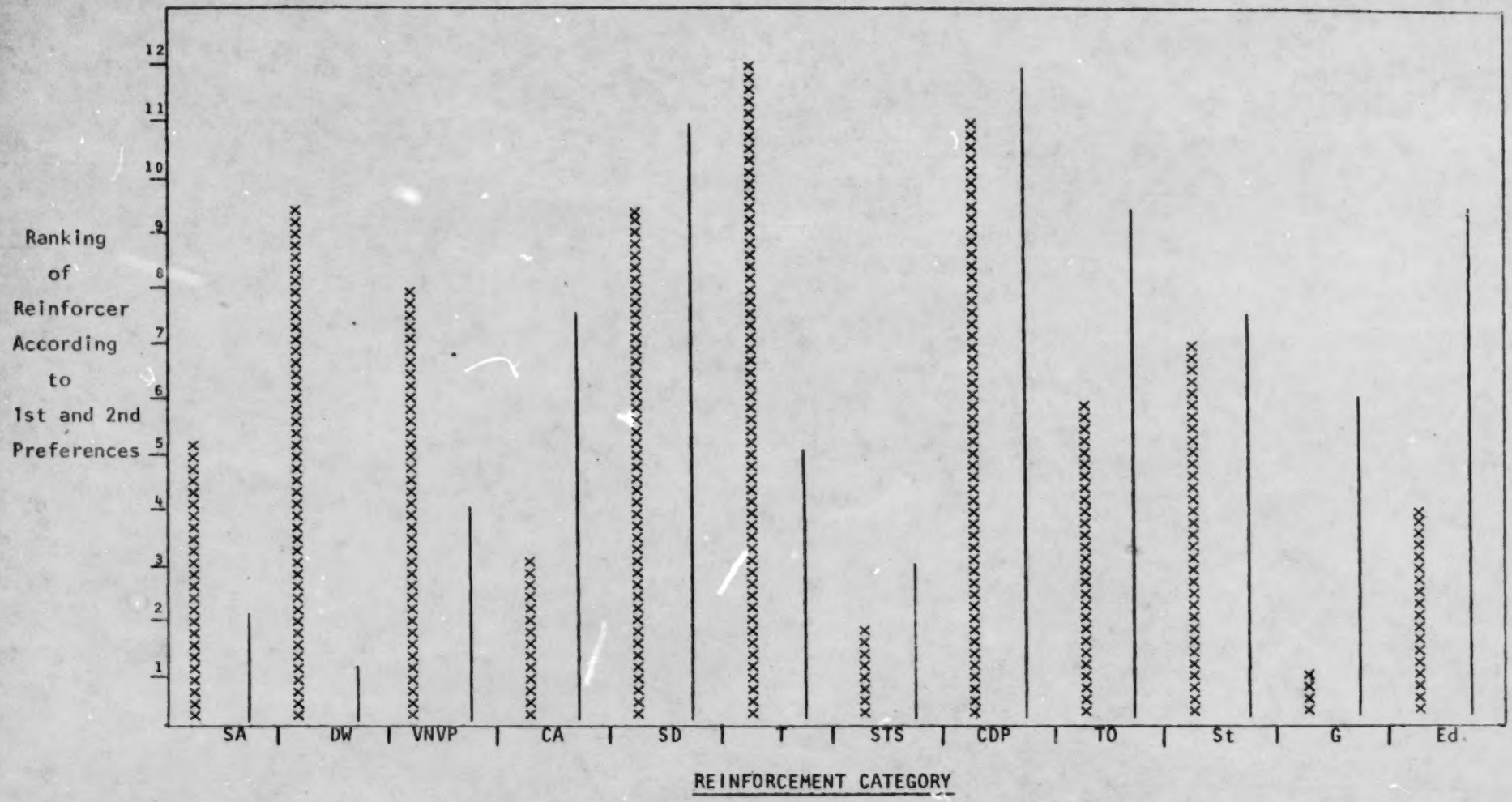


*FIGURE FIVE: TEACHER - PUPIL REWARD PREFERENCES: SEVEN YEAR OLDS*

xxxx Seven Year Old Pupils-

____ Teachers of Seven Year Olds

SA = Social Approval
DW = Display of Work
VNVP = Verbal-non verbal Praise
CA = Contingent Activity
SD = Special Duties
T = Tokens
STS = Stamps, Ticks, Stars
CDP = Choice of Desk Partners
TO = Time Off
St = Stationery
G = Gifts
Ed = Edibles

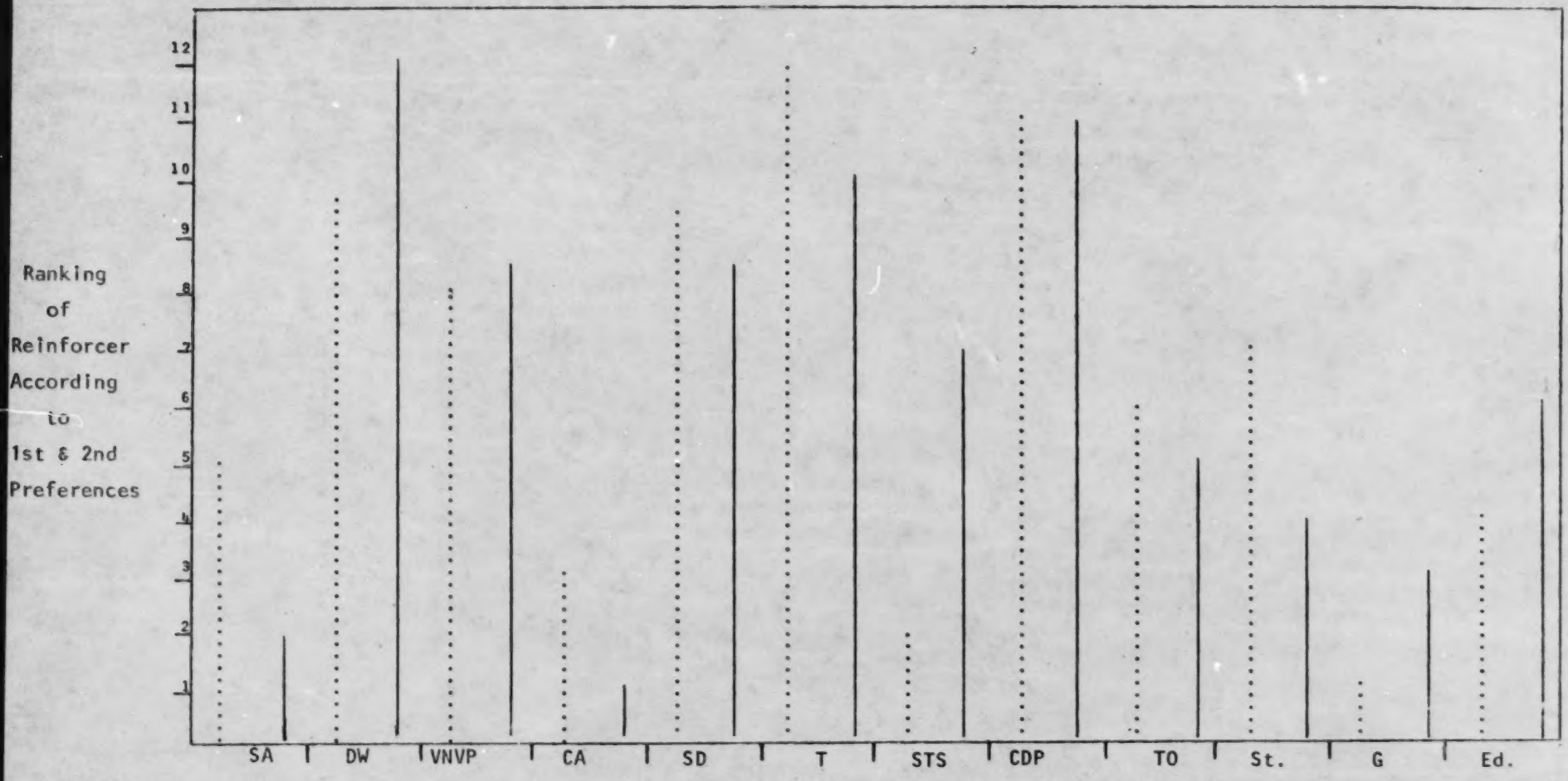


*FIGURE SIX: REWARD PREFERENCES: SEVEN YEAR OLD PUPILS & TEN YEAR OLD PUPILS*





.... Seven Year Old Pupils
___ Ten Year Old Pupils

SA = Social Approval
DW = Display of Work
VNVP = Verbal-non verbal Praise
CA = Contingent Activity
SD = Special Duties
T = Tokens
STS = Stamps, Ticks, Stars
CDP = Choice of Desk Partners
TO = Time Off
St = Stationery
G = Gifts
Ed = Edibles

choice, according to frequency rankings and according to first and second preferences while the ten year old females ranked Social Approval as their second choice of reinforcer. (See Figure 7). It could be that the difference in importance attached to Social Approval by females and males is in part a reflection of the importance given to peer group approval by ten year old females and males.

The ten year old females ranked Stationery third, followed by Time-off and then Stamps-ticks-stars. The ten year old males ranked Time-off as their third preference followed by Stationery and Social Approval. The females ranked Gifts eighth according to their first and second preferences.

8.7 Reward Preferences of ten year old pupils according to School Attainment Level

The data provided by the sample of ten year olds (Appendix 3, Table 9) suggests that greater emphasis is given by pupils of high school attainment level to non-tangible reinforcers than is by pupils of lower attainment levels.

Pupils categorized as being of A attainment level ranked the reinforcer, Social Approval as their first preference. Pupils categorized as being of B,C & D attainment levels ranked the reinforcer Contingent Activity as their first preference. Pupils categorized as being of E attainment level ranked the reinforcers, Choice of Desk Partners and Time-off as their equal first preference. (See Figure 8).

Pupils of A attainment level ranked Contingent Activity as their second choice followed by Time-off. Pupils of B attainment level ranked Social Approval and Stationery as equal second choices followed by Gifts. Pupils of C attainment level ranked Social Approval as their second choice followed by Stationery. Pupils of D attainment level ranked Gifts as their second choice followed by Social Approval. Pupils of E attainment level ranked Gifts as their second choice followed by Contingent Activity.

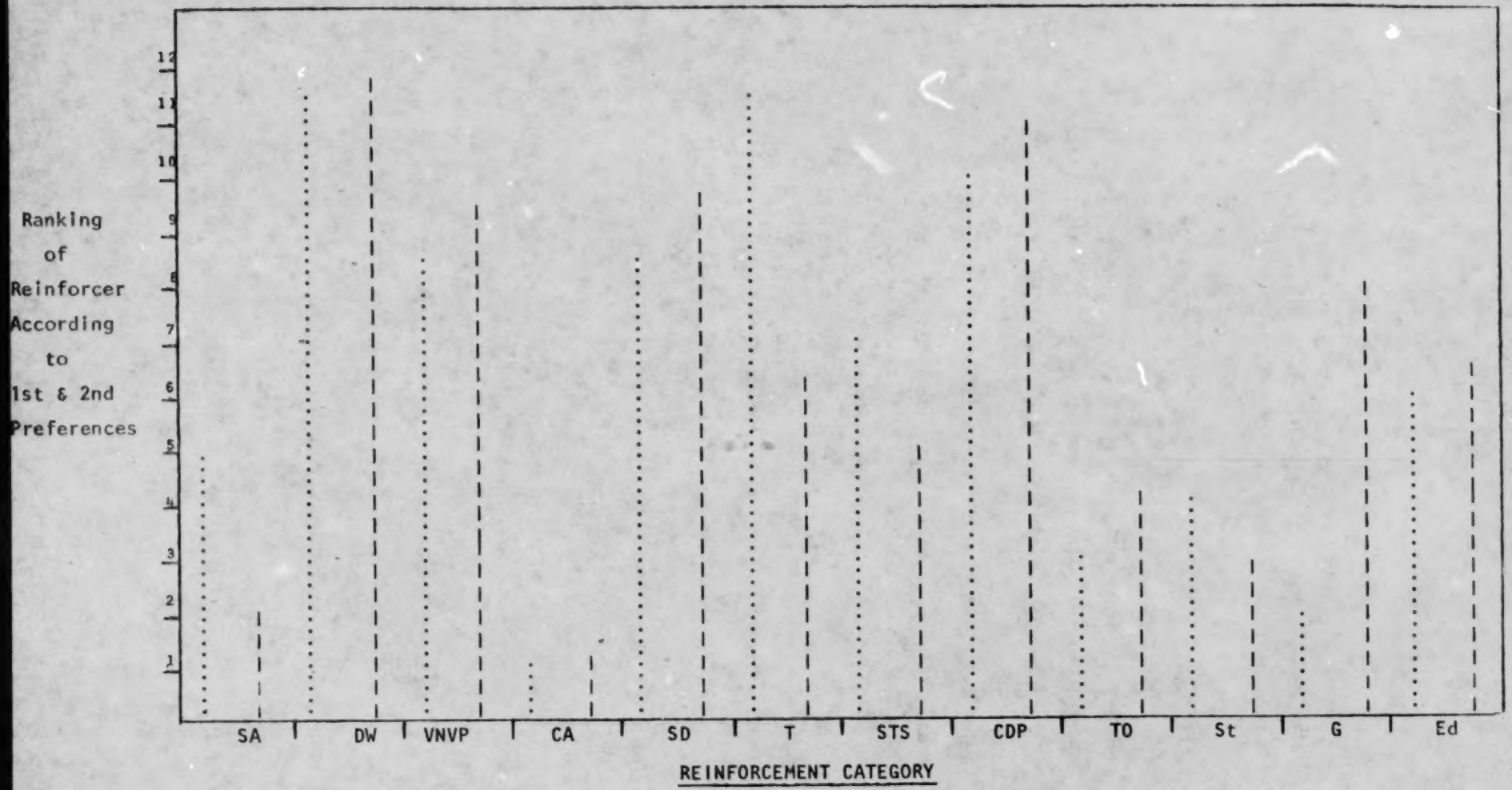


*FIGURE SEVEN: REWARD PREFERENCES OF TEN YEAR OLD MALES & FEMALES*

.... Ten Year Old Males

- - - Ten Year Old Females

SA = Social Approval
DW = Display of Work
VNVP = Verbal-non verbal Praise
CA = Contingent Activity
SD = Special Duties
T = Tokens
STS = Stamps, Ticks, Stars
CDP = Choice of Desk Partners
TO = Time Off
St = Stationery
G = Gifts
Ed = Edibles

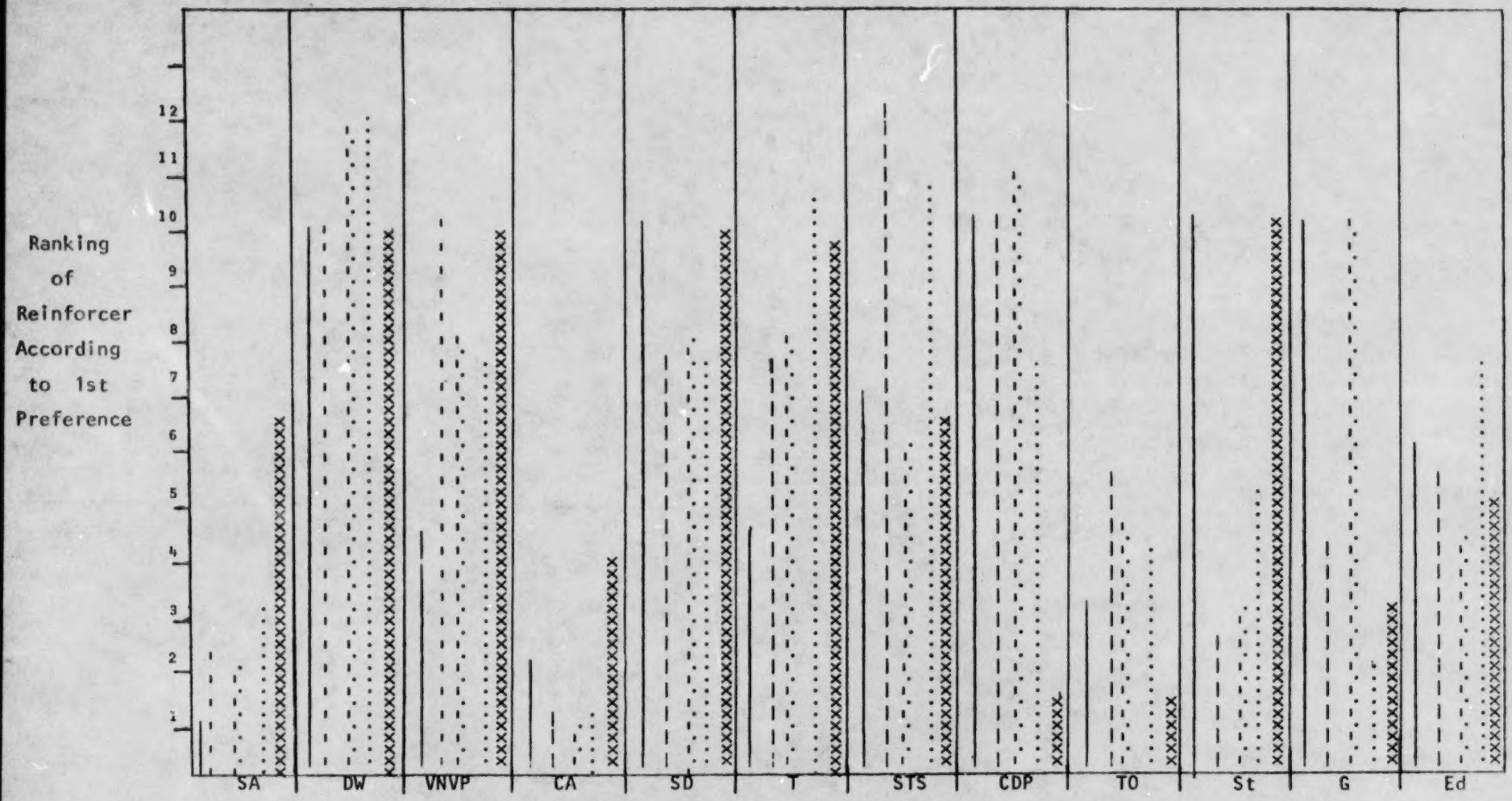


*FIGURE EIGHT: REWARD PREFERENCES OF TEN YEAR OLD PUPILS ACCORDING TO ATTAINMENT LEVEL*

____A attainment level
_ _ B attainment level
-.-.C attainment level
....D attainment level
xxx E attainment level

SA = Social Approval
DW = Display of Work
VNVP = Verbal-non verbal Praise
CA = Contingent Activity
SD = Special Duties
T = Tokens
STS = Stamps,Ticks,Stars
CDP = Choice of Desk Partners
TO = Time Off
St = Stationery
G = Gifts
Ed = Edibles

8.8 Teacher Reward Preferences for Ten Year Old Pupils

The data provided by the sample of teachers of ten year olds (Appendix 3, Table 10) clearly indicated that they placed greatest emphasis on non-tangible reinforcers. The sample ranked the reinforcer Display of Work first according to frequency and also according to their first and second preference rankings. This was followed by the reinforcers Social Approval and Verbal-non verbal Praise respectively. The sample of ten year old pupils ranked the reinforcer Display of Work twelth, Social Approval second and Verbal-non verbal Praise eighth equal. Whereas the sample of ten year old pupils ranked Contingent Activity first, the teacher sample ranked this reinforcer seventh. (See Figure 9).

## 9.0 CONCLUSIONS

### 9.1 Overview

This survey was primarily intended as a preliminary inquiry in the hope that issues for further research might be raised. It must be stressed that the validity of the results of this survey will have been influenced by the problems inherent in the survey design which were previously mentioned. Obviously these must be kept in mind when the following conclusions and comments are being considered. The comments are merely intended as 'thoughts for discussion' and possible starting points for future studies.

Although the inherent problems associated with the survey design have imposed limitations on the results it is suggested that the survey went some way to achieving its aims. Consideration of the collated data appears to give some support to the main hypotheses:

$H_1$: *There is no relationship between teachers' use of reinforcers and students' preferences for reinforcers.*

$H_2$: *There is a relationship between a child's attainment level and his preference for reinforcers.*

$H_3$: *There is no relationship between a child's sex and his preference for reinforcers.*

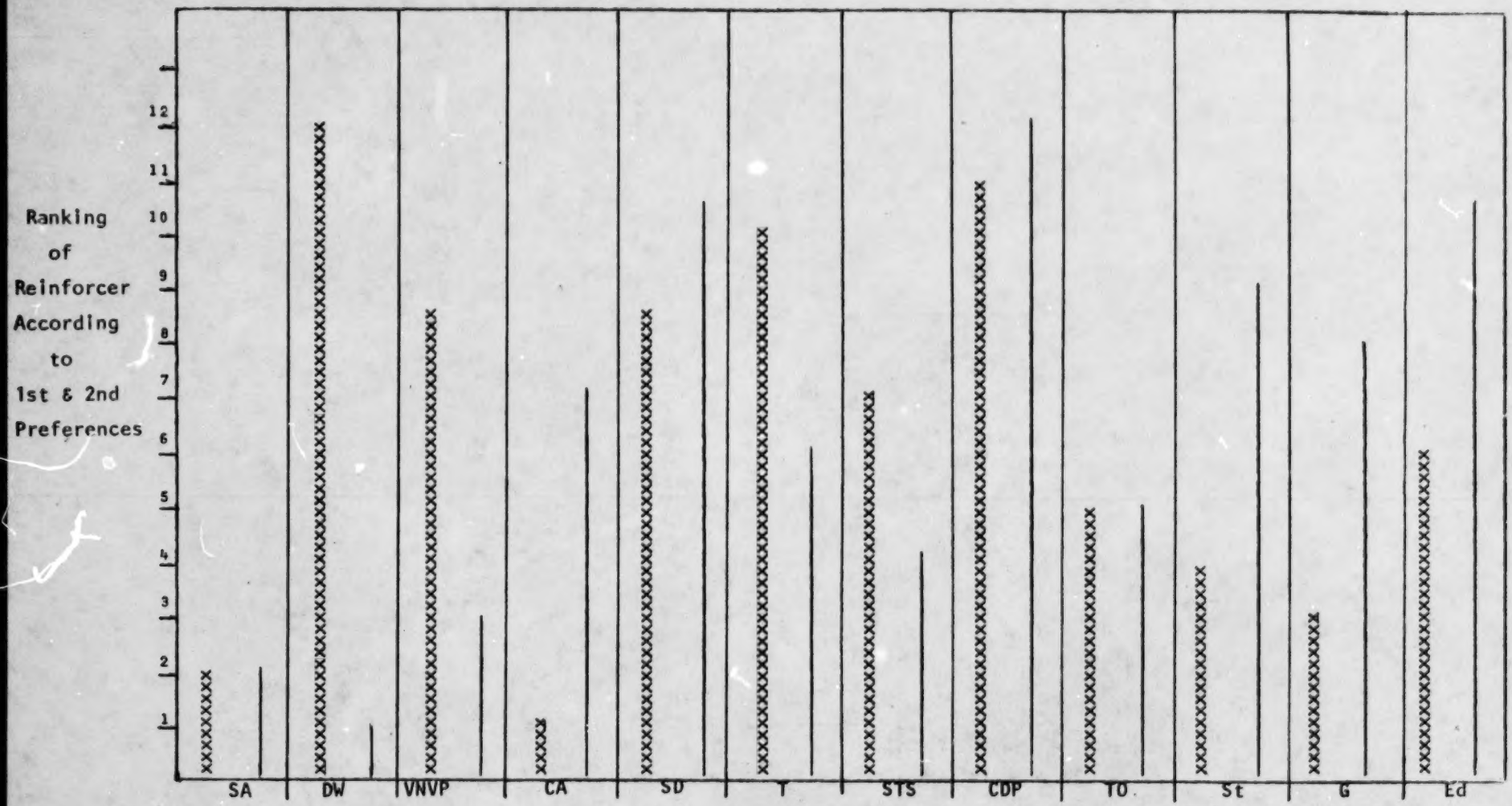


*FIGURE NINE: TEACHER-PUPIL REWARD PREFERENCES: TEN YEAR OLDS*

xxxx Ten Year Old Pupils

____ Teachers of Ten Year Old Pupils

SA = Social Approval
DW = Display of Work
VNVP = Verbal-non verbal Praise
CA = Contingent Activity
SD = Special Duties
T = Tokens
STS = Stamps, Ticks, Stars
CDP = Choice of Desk Partners
TO = Time Off
St = Stationery
G = Gifts
Ed = Edibles

In addition, the following conclusions appear to be warranted:

a) *The meaningfulness and relevance of some of the 'traditional reinforcers' is influenced by over-exposure.*

b) *The children themselves can be a source for meaningful-relevant reinforcers.*

9.2 Discrepancy between Teachers' use of reinforcers and childrens' preferences for reinforcers

Perhaps one of the most interesting results of this survey is the indication it gives of a discrepancy between the reward preferences of the pupils and those of the teachers. The teachers of both seven year old pupils and ten year old pupils place considerably more emphasis on non-tangible reinforcers than did the pupils themselves.

The reasons for this difference are open to speculation but it is suggested that to some extent it could be due to the reservations many classroom teachers have regarding the long-term effects of the use of tangible reinforcers and the associated ethical queries they may have.

It may well be that the discrepancy arises because the teachers think that non-tangible reinforcers actually work better than tangible reinforcers. It would have been interesting to have asked the teachers what they thought the pupils would want.

If the discrepancy between teachers' use of reinforcers and childrens' preferences for reinforcers indicated by this survey is common place in the normal classroom situation it is an issue which is in need of serious consideration. It was suggested earlier that if reinforcement is to be of value in motivating learning in the classroom situation the reinforcement used must be both relevant and meaningful to the pupils concerned. The indication of this survey is that many of the non-tangible reinforcers used by classroom teachers are not considered by the pupils as being the most relevant or meaningful.

Ticks, stamps, stars, grades, written comments, verbal praise,

displaying of work are convenient reinforcers for the classroom teacher to use. They are readily available, easy to administer and don't have the associated overtones of 'bribery' that many of the tangible reinforcers do. The point is, how relevant to the child's needs and how meaningful to his particular values, attitudes and interests are such reinforcers? And most important, what effect does appropriate/inappropriate use of reinforcers have on a child's performance?

9.3 Reinforcement Preference and Attainment Level

The results of this survey appeared to support the notion that as a child's mastery of skills increases the value of the non-tangible reinforcers increases also.

This contention was supported by data from the surveys that indicated:

i. The ten year old sample members attached more importance to non-tangible reinforcers than did the seven year old sample members.

ii. The ten year old sample members of high school attainment levels attached more importance to the non-tangible reinforcers than did sample members of low school attainment levels.

It is suggested that due to the fact that many children of low school attainment levels are 'failure oriented' in their attitude towards learning many of the non-tangible reinforcers are too remote, too obscure to be meaningful and relevant to them. Just as a great deal of the learning of children of low school attainment levels need to be related to 'concrete-cues' so too does the reinforcement they receive. This is particularly so in the initial stages of the learning task being undertaken. It is suggested that for children of low school attainment level reinforcement initially needs to be something extrinsic, something they can see, touch and show. To illustrate: A child of low school attainment level might be asked to write a story about his favourite television programme. His best effort might result in three poorly constructed sentences.

The child knows he has given of his best and might well experience a degree of 'job satisfaction'. However, it is likely that the child also knows that his best is well below the standard of the rest of the class. To have his work displayed as a means of reinforcement could in fact be quite aversive to him. To be allowed to spend some time on a contingent activity for having worked hard is likely to be seen and felt as more meaningful to him.

9.4 The Danger of Over-exposure of reinforcements

The survey suggested an interesting trend regarding one of the most 'traditional' classroom reinforcers - Stamps, ticks and stars. The seven year old children attached considerable importance to this reinforcer ranking it as their second preference overall. However, the ten year old children attached much less importance to this reinforcer ranking it seventh overall.

It is suggested that both the decline in importance attached to the reinforcer Stamps, ticks and stars between seven and ten year old children, as indicated by this survey, and the rather low ranking of Verbal-non verbal Praise by both sample groups, supports the contention that a reinforcer's effectiveness and value is diminished by over use. A stamp, tick or star would appear to have considerable value for a seven year old as it is still seen as a rather novel reward. However, following two more years of continual exposure to this reinforcer in their normal classroom programme, the children come to see it less as a reward and more as a classroom routine. For many children teacher written and verbal praise confronts them daily from the time they enter school. It could be that part of the explanation for the low preference ranking given to Verbal-non verbal praise by the children in this survey lies in the possibility that the children come to view it not so much as a reward but more as normal teacher practice.

9.5 Sex and Reinforcement Preference

Although this survey did not reveal any positive indications that a child's sex is a significant variable in reinforcement preferences it did reveal two interesting trends amongst the ten year old children. The survey indicated that ten year old females place considerably more importance on the reinforcer Social Approval than do ten year old males. It also indicated that ten year old males place considerably more importance on the reinforcer Gifts than do ten year old females. These two trends are particularly interesting in that in a 'reinforcement-hierarchy' such as that suggested by Forness (1973) Social Approval and Gifts are at opposite ends of the hierarchy.

The variance in emphasis between ten year old males and females regarding the reinforcer Social Approval could partly be explained by variances in their respective levels of self awareness. The variance may be a reflection of the importance placed on social prestige by ten year old females. The ten year old males' emphasis on gifts might partly be explained by the respective values they place on material possessions and peer group approval. Perhaps for the ten year old male it is more meaningful to be rewarded by a material possession than to be rewarded by receiving the approval of his peers or adults.

9.6 Children can be the source of meaningful-relevant reinforcers

The survey suggested that Choice of Desk Partners is a reinforcer that is meaningful and relevant to many pupils but one that is overlooked as a source of reinforcement by teachers. Although it was ranked low by both pupil sample groups it is perhaps significant that it was referred to nine times by the seven year children and forty one times by the ten year old children. It was not referred to at all by the teachers of seven or ten year old children.

It is suggested that this instance serves to illustrate the contention that often a teacher should look to the individual child to determine meaningful and relevant reinforcers for him.

It is from the individual child's interests, leisure time activities, work habits, personality and attitudes that a teacher will find the source of meaningful reinforcers.

9.7 General conclusion

Perhaps the most relevant indication given by data from this survey is the need for teachers to be 'selective' in their choice of reinforcers when implementing planned programmes of reinforcement. This survey has indicated that in selecting reinforcers there is a need for teachers to consider:

i. The child's current attainment level and developmental level
ii. The child's previous exposure to various reinforcers
iii. The child's interests, work habits, personality
iv. The particular behaviour to be reinforced.

The haphazard choice of reinforcers for a planned programme of reinforcement is unlikely to result in maximum benefit arising from the contingency that has been set up.

## 10.0 BIBLIOGRAPHY


BIRNEY, R.C. & TEEVAN R.C. — Reinforcement. New Jersey: D. Van Nostrand Co. Inc., 1961.

BOLLES R.C. — Theory of Motivation. New York: Harper and Row Co., 1967.

CROSS R. & MURPHY J. — The Revolution in the Schools. New YorK: Harcourt Brace and World Inc., 1966.

FORNESS S.R. — "The Reinforcement Hierarchy," Psychology in the Classroom, 1973, cited by BOLLARD K.D. in "Reinforcement and its Overkill," National Education, Wellington: Government printers, April 1st 1976, pp.55-59.

HOLT J. — How Children Learn. New York: Pitman, 1967.

HOMME L. — How to Use Contingency Contracting in the Classroom. Illinois: Research Press Co., 1970.

HOMME L., CSANYI A.P., GONZALES M.A. & RECHS J.R. — How to Use Contingency Contracting in the Classroom. Illinois: Research Press, 1974.

KRUMBOLTZ J.D. & KRUMBOLTZ H.B. — Changing Children's Behaviour. New Jersey: Prentice Hall Inc., 1972.

NEISWORTH J.T. & SMITH R.M. — Modifying Retarded Behaviour. Boston: Houghton Mifflin Co., 1973.

RUSSELL I.L. — Motivation. Iowa: W.C. Brown Co., 1972.

SKINNER B.F. — "The Science of Learning & the Art of Teaching" cited in CROSS R. and MURPHY J., The Revolution in the Schools. New York: Harcourt, Brace & World Inc., 1964.

SMITH M.D. — Educational Psychology and Its Classroom Application. Boston: Allyn and Bacon Inc., 1975.

## APPENDICES

APPENDIX 1. Data Sheet One and Data Sheet Two:

Data collectors' recording sheets.

APPENDIX 2. Letter and Questionnaire:

sent to Principals and teachers of seven and ten year olds.

APPENDIX 3. Tables of results:

Table 1 : Reward Preferences of Seven Year Olds

Table 2 : Reward Preferences of Seven Year Old Males

Table 3 : Reward Preferences of Seven Year Old Females

Table 4 : Reward Preferences of Seven Year Olds According to Attainment

Table 5 : Teachers' Reward Preferences for Seven Year Olds

Table 6 : Reward Preferences of Ten Year Olds

Table 7 : Reward Preferences of Ten Year Old Males

Table 8 : Reward Preferences of Ten Year Old Females

Table 9 : Reward Preferences of Ten Year Olds According to Attainment

Table 10 : Teachers' Reward Preferences for Ten Year Olds.

APPENDIX 4. A List of Specific Reward Suggestions:

offered by pupil and teacher sample members.

APPENDIX 5. A List of Teacher Comments

## APPENDIX 1

DATA SHEET ONE:

SEVEN YEAR OLD REWARD PREFERENCES:

SEX: _____

CHRONOLOGICAL AGE: _____

SCHOOL ATTAINMENT RATING: _____

ETHNIC ORIGIN: _____

REWARD PREFERENCES:

1. _____
2. _____
3. _____
4. _____
5. _____

---

DATA SHEET TWO:

TEN YEAR OLD REWARD PREFERENCES:

SEX: _____

CHRONOLOGICAL AGE: _____

SCHOOL ATTAINMENT RATING: _____

ETHNIC ORIGIN: _____

REWARD PREFERENCES:

1. _____
2. _____
3. _____
4. _____
5. _____

APPENDIX 2 (A)

# Churchlands College of Advanced Education

Pearson Street, Churchlands, Western Australia, 6018. Telephone 387 5999.


15th October, 1976.

Dear Sir,

I am currently conducting an inquiry into primary children's reinforcement preferences. Interest in this particular area was aroused by the suggestion made by several educationalists that we ought to look more carefully at the relationship between the reinforcements we think are appropriate or meaningful to children and what the children themselves think.

Assisted by a group of ten second year students from Churchlands Teachers College I am attempting to determine what rewards/reinforcement seven and ten year old children regard as being meaningful in the classroom and school situation. I am also attempting to isolate some of the variables which influence seven and ten year old reward preferences. An attempt is also being made to determine how relevant reward selections made by adults for seven and ten year olds are.

Data has already been collected from a sample of 200 7 year olds, a sample of 200 10 year olds and a sample of 200 second year training college students. The samples of 7 and 10 year olds were asked to rank in order of preference 5 rewards they would most like to receive for having written a good story in class. The sample of training college students were asked to rank in order of preference 5 rewards they felt would be most appropriate for seven and ten year olds who had written a good story.

Although analysis of the available data has only just begun, some interesting trends are already beginning to emerge, e.g. the data seems to indicate a considerable discrepancy between what the 7 and 10 year olds indicated as being desired rewards and what the student sample indicated as relevant rewards for 7 and 10 year olds. It is in connection with this particular trend that I am seeking your assistance. I would like now to compare seven and ten year olds' rewards choices with choices made by practicing teachers of 7 and 10 year olds. If you and your staff were agreeable I would be grateful if teachers of 7 and 10

.../2

year olds on your staff could list on the enclosed forms in descending order of preference, 5 rewards they consider most meaningful for the average 7 and 10 year old for having written a good story in class. The identity of the staff involved and their school would remain totally anonymous as at no stage does this information need to be divulged. If your staff are able to assist with this matter could the completed data sheets be returned in the enclosed stamp addressed envelopes. It is intended that the findings of this survey will be written up and made available to any school interested in examining them.

If you would like to discuss this matter further please contact Lou Thompson, Ed. Psych Department, Churchlands Teachers College, phone 875-999 Ext. 414.

Yours sincerely,

LOU THOMPSON,
Ed. Psych. Department.

## APPENDIX 2(B)

## SURVEY OF REINFORCEMENT PREFERENCE

TEACHER REINFORCEMENT PREFERENCES

Information:

Could you list in the appropriate column, in descending order of preference, 5 rewards you consider most meaningful for a 7 year old or a 10 year old pupil who has written a good story in class. Any comments you care to make regarding classroom reinforcement practices would be gratefully accepted.

If you are able to assist in supplying the requested data I am most grateful and thank you for your cooperation.

Lou Thompson,
Ed. Psych. Department,
Churchlands College of
Advanced Education.

| Seven Year Old Reward Preferences. | or | Ten Year Old Reward Preferences. |
|---|---|---|
| 1. _____ | | 1. _____ |
| 2. _____ | | 2. _____ |
| 3. _____ | | 3. _____ |
| 4. _____ | | 4. _____ |

COMMENTS:

## APPENDIX 3

TABLE ONE: REWARD PREFERENCES OF SEVEN YEAR OLDS (N=281)

| | FREQUENCY (Total of Preferences) | PREFERENCES | | | | | RANKING OF REINFORCERS | | |
|---|---|---|---|---|---|---|---|---|---|
| | | 1 | 2 | 3 | 4 | 5 | According to Frequency | According to Frequency of 1st & 2nd Preferences | |
| | | | | | | | Rank | Frequency | Rank |
| SOCIAL APPROVAL | 88 | 38 | 17 | 9 | 11 | 13 | 5 | 55 | 5 |
| DISPLAY OF WORK | 15 | 2 | 5 | 2 | 2 | 4 | 10 | 7 | 9.5 |
| VERBAL - NON VERBAL PRAISE | 35 | 7 | 11 | 6 | 5 | 6 | 8 | 18 | 8 |
| CONTINGENT ACTIVITY | 202 | 36 | 36 | 48 | 40 | 42 | 3 | 72 | 3 |
| SPECIAL DUTIES | 17 | 4 | 3 | 5 | 1 | 4 | 9 | 7 | 9.5 |
| TOKENS | 1 | 0 | 0 | 1 | 0 | 0 | 12 | 0 | 12 |
| STAMPS, TICKS, STARS | 269 | 70 | 64 | 57 | 44 | 34 | 2 | 134 | 2 |
| CHOICE OF DESK PARTNERS | 9 | 1 | 0 | 4 | 1 | 3 | 11 | 1 | 11 |
| TIME OFF | 82 | 13 | 23 | 13 | 19 | 14 | 6 | 36 | 6 |
| STATIONERY | 75 | 11 | 16 | 14 | 19 | 15 | 7 | 27 | 7 |
| GIFTS | 347 | 63 | 74 | 80 | 71 | 59 | 1 | 137 | 1 |
| EDIBLES | 147 | 31 | 31 | 31 | 30 | 24 | 4 | 62 | 4 |
| NO RESPONSE | 100 | 5 | 9 | 14 | 30 | 42 | | | |

TABLE TWO: REWARD PREFERENCES OF SEVEN YEAR OLD MALES (N=146)

| REINFORCER | FREQUENCY (Total of Preferences) | PREFERENCES | | | | | RANKING OF REINFORCERS | | |
|---|---|---|---|---|---|---|---|---|---|
| | | 1 | 2 | 3 | 4 | 5 | According to Frequency | According to Frequency of 1st & 2nd Preferences | |
| | | | | | | | Rank | Frequency | Rank |
| SOCIAL APPROVAL | 50 | 22 | 11 | 5 | 6 | 6 | 5.5 | 33 | 4 |
| DISPLAY OF WORK | 6 | 0 | 1 | 1 | 1 | 3 | 8.5 | 1 | 10.5 |
| VERBAL - NON VERBAL PRAISE | 6 | 2 | 1 | 2 | 0 | 1 | 8.5 | 3 | 8.5 |
| CONTINGENT ACTIVITY | 78 | 13 | 15 | 20 | 15 | 15 | 4 | 28 | 5 |
| SPECIAL DUTIES | 5 | 2 | 1 | 1 | 0 | 1 | 10.5 | 3 | 8.5 |
| TOKENS | 0 | 0 | 0 | 0 | 0 | 0 | 12 | 0 | 12 |
| STAMPS, TICKS, STARS | 139 | 34 | 29 | 28 | 27 | 21 | 2 | 63 | 2 |
| CHOICE OF DESK PARTNERS | 5 | 1 | 0 | 0 | 1 | 3 | 10.5 | 1 | 10.5 |
| TIME OFF | 50 | 9 | 14 | 8 | 12 | 7 | 5.5 | 23 | 6 |
| STATIONERY | 37 | 8 | 9 | 7 | 7 | 6 | 7 | 17 | 7 |
| GIFTS | 189 | 32 | 40 | 46 | 39 | 32 | 1 | 72 | 1 |
| EDIBLES | 94 | 22 | 20 | 18 | 17 | 17 | 3 | 42 | 3 |
| NO RESPONSE | 8 | 1 | 2 | 0 | 2 | 3 | | | |

TABLE THREE: REWARD PREFERENCES OF SEVEN YEAR OLD FEMALES (N=135)

| REINFORCER | FREQUENCY (Total of Preferences) | PREFERENCES | | | | | RANKING OF REINFORCERS | | |
|---|---|---|---|---|---|---|---|---|---|
| | | 1 | 2 | 3 | 4 | 5 | According to Frequency | According to Frequency of 1st & 2nd Preferences | |
| | | | | | | | Rank | Frequency | Rank |
| SOCIAL APPROVAL | 38 | 16 | 6 | 4 | 5 | 7 | 5.5 | 22 | 4 |
| DISPLAY OF WORK | 9 | 2 | 4 | 1 | 1 | 1 | 10 | 6 | 9 |
| VERBAL - NON VERBAL PRAISE | 29 | 5 | 10 | 4 | 5 | 5 | 8 | 15 | 6 |
| CONTINGENT ACTIVITY | 124 | 23 | 21 | 28 | 25 | 27 | 3 | 44 | 3 |
| SPECIAL DUTIES | 12 | 2 | 2 | 4 | 1 | 3 | 9 | 4 | 10 |
| TOKENS | 1 | 0 | 0 | 1 | 0 | 0 | 12 | 0 | 11.5 |
| STAMPS, TICKS, STARS | 130 | 36 | 35 | 29 | 17 | 13 | 2 | 71 | 1 |
| CHOICE OF DESK PARTNERS | 4 | 0 | 0 | 4 | 0 | 0 | 11 | 0 | 11.5 |
| TIME OFF | 32 | 4 | 9 | 5 | 7 | 7 | 7 | 13 | 7 |
| STATIONERY | 38 | 3 | 7 | 7 | 12 | 9 | 5.5 | 10 | 8 |
| GIFTS | 158 | 31 | 34 | 34 | 32 | 27 | 1 | 65 | 2 |
| EDIBLES | 53 | 9 | 11 | 13 | 13 | 7 | 4 | 20 | 5 |
| NO RESPONSE | 92 | 4 | 7 | 14 | 28 | 39 | | 11 | |

TABLE FOUR: REWARD PREFERENCES OF SEVEN YEAR OLDS ACCORDING TO ATTAINMENT (N=281)

(Frequency = Number of 1st Preferences only)

| REINFORCER | A: ATTAINMENT | | B: ATTAINMENT | | C: ATTAINMENT | | D: ATTAINMENT | | E: ATTAINMENT | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Frequency | Ranking | Frequency | Ranking | Frequency | Ranking | Frequency | Ranking | Frequency | Ranking |
| SOCIAL APPROVAL | 7 | 3 | 10 | 3 | 10 | 4 | 8 | 3.5 | 3 | 3.5 |
| DISPLAY OF WORK | 2 | 6 | 0 | 10.5 | 0 | 11 | 0 | 11 | 0 | 9 |
| VERBAL - NON VERBAL PRAISE | 4 | 5 | 2 | 6.5 | 1 | 9 | 0 | 11 | 0 | 9 |
| CONTINGENT ACTIVITY | 10 | 1.5 | 8 | 5 | 10 | 4 | 8 | 3.5 | 0 | 9 |
| SPECIAL DUTIES | 0 | 10 | 0 | 10.5 | 2 | 8 | 2 | 6.5 | 0 | 9 |
| TOKENS | 0 | 10 | 0 | 10.5 | 0 | 11 | 0 | 11 | 0 | 9 |
| STAMPS, TICKS, STARS | 10 | 1.5 | 20 | 1 | 20 | 1 | 20 | 1 | 0 | 9 |
| CHOICE OF DESK PARTNERS | 0 | 10 | 0 | 10.5 | 0 | 11 | 1 | 8.5 | 0 | 9 |
| TIME OFF | 5 | 4 | 1 | 8 | 3 | 7 | 2 | 6.5 | 2 | 5 |
| STATIONERY | 0 | 10 | 2 | 6.5 | 5 | 6 | 1 | 8.5 | 3 | 3.5 |
| GIFTS | 0 | 10 | 11 | 2 | 19 | 2 | 19 | 2 | 14 | 1 |
| EDIBLES | 1 | 7 | 9 | 4 | 10 | 4 | 6 | 5 | 5 | 2 |
| NO RESPONSE | 0 | | 0 | | 0 | | 3 | | 2 | |
| | N=39 | | N=63 | | N=80 | | N=70 | | N=29 | |

TABLE FIVE: TEACHERS' REWARD PREFERENCES FOR SEVEN YEAR OLDS (N=74)

| REINFORCER | FREQUENCY (Total of Preferences) | PREFERENCES | | | | | RANKING OF REINFORCERS | | |
|---|---|---|---|---|---|---|---|---|---|
| | | 1 | 2 | 3 | 4 | 5 | According to Frequency | According to Frequency of 1st & 2nd Preferences | |
| | | | | | | | Rank | Frequency | Rank |
| SOCIAL APPROVAL | 55 | 19 | 14 | 11 | 8 | 3 | 3 | 33 | 2 |
| DISPLAY OF WORK | 113 | 21 | 19 | 30 | 25 | 18 | 1 | 40 | 1 |
| VERBAL - NON VERBAL PRAISE | 47 | 13 | 7 | 5 | 6 | 16 | 4 | 20 | 4 |
| CONTINGENT ACTIVITY | 13 | 1 | 2 | 2 | 1 | 7 | 6 | 3 | 7.5 |
| SPECIAL DUTIES | 7 | 1 | 0 | 3 | 1 | 2 | 9 | 1 | 11 |
| TOKENS | 20 | 1 | 6 | 2 | 6 | 5 | 5 | 7 | 5 |
| STAMPS, TICKS, STARS | 81 | 9 | 23 | 18 | 19 | 12 | 2 | 32 | 3 |
| CHOICE OF DESK PARTNERS | 0 | 0 | 0 | 0 | 0 | 0 | 12 | 0 | 12 |
| TIME OFF | 9 | 1 | 1 | 1 | 3 | 3 | 7.5 | 2 | 9.5 |
| STATIONERY | 5 | 2 | 1 | 0 | 2 | 0 | 10.5 | 3 | 7.5 |
| GIFTS | 5 | 5 | 0 | 0 | 0 | 0 | 10.5 | 5 | 6 |
| EDIBLES | 9 | 1 | 1 | 2 | 2 | 3 | 7.5 | 2 | 9.5 |
| NO RESPONSE | 0 | 0 | 0 | 0 | 0 | 0 | | | |

TABLE SIX: REWARD PREFERENCES OF TEN YEAR OLDS (N=359)

| REINFORCER | FREQUENCY (Total of Preferences) | PREFERENCES | | | | | RANKING OF REINFORCERS | | |
|---|---|---|---|---|---|---|---|---|---|
| | | 1 | 2 | 3 | 4 | 5 | According to Frequency | According to Frequency of 1st & 2nd Preferences | |
| | | | | | | | Rank | Frequency | Rank |
| SOCIAL APPROVAL | 126 | 51 | 33 | 17 | 14 | 11 | 4 | 84 | 2 |
| DISPLAY OF WORK | 30 | 3 | 6 | 6 | 7 | 8 | 11 | 9 | 12 |
| VERBAL - NON VERBAL PRAISE | 57 | 15 | 8 | 11 | 12 | 11 | 8 | 23 | 8.5 |
| CONTINGENT ACITIVITY | 413 | 120 | 65 | 90 | 84 | 54 | 1 | 185 | 1 |
| SPECIAL DUTIES | 53 | 12 | 11 | 12 | 10 | 8 | 9 | 23 | 8.5 |
| TOKENS | 29 | 16 | 4 | 3 | 3 | 3 | 12 | 20 | 10 |
| STAMPS, TICKS, STARS | 67 | 14 | 17 | 8 | 11 | 17 | 7 | 31 | 7 |
| CHOICE OF DESK PARTNERS | 41 | 12 | 6 | 11 | 5 | 7 | 10 | 18 | 11 |
| TIME OFF | 102 | 33 | 32 | 18 | 7 | 12 | 6 | 65 | 5 |
| STATIONERY | 181 | 27 | 40 | 39 | 41 | 34 | 3 | 67 | 4 |
| GIFTS | 192 | 22 | 49 | 44 | 39 | 38 | 2 | 71 | 3 |
| EDIBLES | 104 | 23 | 20 | 21 | 17 | 23 | 5 | 43 | 6 |
| NO RESPONSE | 385 | 11 | 57 | 66 | 114 | 137 | | | |

TABLE SEVEN: REWARD PREFERENCES OF TEN YEAR OLD MALES (N=169)

| REINFORCER | FREQUENCY (Total of Preferences) | PREFERENCES | | | | | RANKING OF REINFORCERS | | |
|---|---|---|---|---|---|---|---|---|---|
| | | 1 | 2 | 3 | 4 | 5 | According to Frequency | According to Frequency of 1st & 2nd Preferences | |
| | | | | | | | Rank | Frequency | Rank |
| SOCIAL APPROVAL | 51 | 20 | 8 | 9 | 7 | 7 | 6 | 28 | 5 |
| DISPLAY OF WORK | 9 | 0 | 3 | 0 | 5 | 1 | 11 | 3 | 11.5 |
| VERBAL - NON VERBAL PRAISE | 20 | 4 | 6 | 3 | 5 | 2 | 8 | 10 | 8.5 |
| CONTINGENT ACTIVITY | 154 | 60 | 42 | 31 | 18 | 3 | 1 | 102 | 1 |
| SPECIAL DUTIES | 19 | 4 | 6 | 3 | 4 | 2 | 9 | 10 | 8.5 |
| TOKENS | 8 | 1 | 2 | 3 | 0 | 2 | 12 | 3 | 11.5 |
| STAMPS, TICKS, STARS | 23 | 4 | 7 | 6 | 3 | 3 | 7 | 11 | 7 |
| CHOICE OF DESK PARTNERS | 15 | 4 | 2 | 5 | 3 | 1 | 10 | 6 | 10 |
| TIME OFF | 65 | 20 | 21 | 15 | 10 | 9 | 4 | 41 | 3 |
| STATIONERY | 101 | 17 | 19 | 30 | 33 | 2 | 3 | 36 | 4 |
| GIFTS | 105 | 15 | 40 | 35 | 5 | 10 | 2 | 55 | 2 |
| EDIBLES | 59 | 14 | 12 | 10 | 9 | 14 | 5 | 26 | 6 |
| NO RESPONSE | 192 | 6 | 42 | 50 | 69 | 35 | | | |

TABLE EIGHT: REWARD PREFERENCES OF TEN YEAR OLD FEMALES (N=190)

| REINFORCER | FREQUENCY (Total of Preferences) | PREFERENCES | | | | | RANKING OF REINFORCERS | | |
|---|---|---|---|---|---|---|---|---|---|
| | | 1 | 2 | 3 | 4 | 5 | According to Frequency | According to Frequency of 1st & 2nd Preferences | |
| | | | | | | | Rank | Frequency | Rank |
| SOCIAL APPROVAL | 75 | 36 | 20 | 5 | 13 | 1 | 4 | 56 | 2 |
| DISPLAY OF WORK | 21 | 3 | 3 | 8 | 3 | 4 | 11.5 | 6 | 12 |
| VERBAL - NON VERBAL PRAISE | 37 | 8 | 5 | 10 | 8 | 6 | 7.5 | 13 | 9.5 |
| CONTINGENT ACTIVITY | 259 | 40 | 43 | 79 | 68 | 29 | 1 | 83 | 1 |
| SPECIAL DUTIES | 34 | 8 | 5 | 8 | 9 | 4 | 9 | 13 | 9.5 |
| TOKENS | 21 | 15 | 2 | 2 | 0 | 2 | 11.5 | 17 | 6.5 |
| STAMPS, TICKS, STARS | 44 | 10 | 10 | 12 | 8 | 4 | 6 | 20 | 5 |
| CHOICE OF DESK PARTNERS | 26 | 8 | 4 | 3 | 9 | 2 | 10 | 12 | 11 |
| TIME OFF | 37 | 13 | 11 | 8 | 5 | 0 | 7.5 | 24 | 4 |
| STATIONERY | 80 | 11 | 20 | 13 | 18 | 18 | 3 | 31 | 3 |
| GIFTS | 87 | 7 | 9 | 33 | 23 | 15 | 2 | 16 | 8 |
| EDIBLES | 45 | 9 | 8 | 16 | 11 | 1 | 5 | 17 | 6.5 |
| NO RESPONSE | 193 | 5 | 59 | 43 | 63 | 23 | | | |

TABLE NINE: REWARD PREFERENCES OF TEN YEAR OLDS ACCORDING TO ATTAINMENT (N=359)

(Frequency = Number of 1st Preferences only)

| REINFORCER | A: ATTAINMENT | | B: ATTAINMENT | | C: ATTAINMENT | | D: ATTAINMENT | | E: ATTAINMENT | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Frequency | Ranking | Frequency | Ranking | Frequency | Ranking | Frequency | Ranking | Frequency | Ranking |
| SOCIAL APPROVAL | 20 | 1 | 10 | 2.5 | 14 | 2 | 6 | 3 | 1 | 6.5 |
| DISPLAY OF WORK | 1 | 10 | 2 | 10 | 0 | 12 | 0 | 12 | 0 | 10 |
| VERBAL - NON VERBAL PRAISE | 6 | 4.5 | 2 | 10 | 5 | 8 | 2 | 7.5 | 0 | 10 |
| CONTINGENT ACTIVITY | 18 | 2 | 35 | 1 | 41 | 1 | 23 | 1 | 3 | 4 |
| SPECIAL DUTIES | 1 | 10 | 4 | 7.5 | 5 | 8 | 2 | 7.5 | 0 | 10 |
| TOKENS | 6 | 4.5 | 4 | 7.5 | 5 | 8 | 1 | 10.5 | 0 | 10 |
| STAMPS, TICKS, STARS | 4 | 7 | 0 | 12 | 8 | 6 | 1 | 10.5 | 1 | 6.5 |
| CHOICE OF DESK PARTNERS | 1 | 10 | 2 | 10 | 2 | 11 | 2 | 7.5 | 5 | 1.5 |
| TIME OFF | 9 | 3 | 5 | 5.5 | 9 | 4.5 | 5 | 4 | 5 | 1.5 |
| STATIONERY | 1 | 10 | 10 | 2.5 | 12 | 3 | 4 | 5 | 0 | 10 |
| GIFTS | 1 | 10 | 6 | 4 | 3 | 10 | 8 | 2 | 4 | 3 |
| EDIBLES | 5 | 6 | 5 | 5.5 | 9 | 4.5 | 2 | 7.5 | 2 | 5 |
| NO RESPONSE | 1 | | 1 | | 2 | | 2 | | 5 | |
| | N=74 | | N=86 | | N=115 | | N=58 | | N=26 | |

TABLE TEN: TEACHERS' REWARD PREFERENCES FOR TEN YEAR OLDS (N=72)

| REINFORCER | FREQUENCY (Total of Preferences) | PREFERENCES | | | | | RANKING OF REINFORCERS | | |
|---|---|---|---|---|---|---|---|---|---|
| | | 1 | 2 | 3 | 4 | 5 | According to Frequency | According to Frequency of 1st & 2nd Preferences | |
| | | | | | | | Rank | Frequency | Rank |
| SOCIAL APPROVAL | 63 | 17 | 15 | 10 | 13 | 8 | 2 | 32 | 2 |
| DISPLAY OF WORK | 109 | 21 | 26 | 25 | 22 | 15 | 1 | 47 | 1 |
| VERBAL - NON VERBAL PRAISE | 39 | 10 | 8 | 7 | 10 | 14 | 3 | 18 | 3 |
| CONTINGENT ACTIVITY | 20 | 3 | 1 | 4 | 3 | 9 | 6 | 4 | 7 |
| SPECIAL DUTIES | 8 | 0 | 1 | 1 | 3 | 3 | 8.5 | 1 | 10.5 |
| TOKENS | 27 | 6 | 2 | 6 | 7 | 6 | 5 | 8 | 6 |
| STAMPS, TICKS, STARS | 32 | 5 | 6 | 10 | 5 | 6 | 4 | 11 | 4 |
| CHOICE OF DESK PARTNERS | 0 | 0 | 0 | 0 | 0 | 0 | 12 | 0 | 12 |
| TIME OFF | 15 | 5 | 5 | 1 | 2 | 2 | 7 | 10 | 5 |
| STATIONERY | 4 | 2 | 0 | 1 | 0 | 1 | 10 | 2 | 9 |
| GIFTS | 8 | 2 | 1 | 0 | 1 | 4 | 8.5 | 3 | 8 |
| EDIBLES | 1 | 0 | 1 | 0 | 0 | 0 | 11 | 1 | 10.5 |
| NO RESPONSE | 0 | 0 | 0 | 0 | 0 | 0 | | | |

## APPENDIX 4

### A LIST OF SPECIFIC REWARD SUGGESTIONS

A selection of specific reward suggestions chosen from pupil and teacher sample responses. These have been categorized under the reinforcement hierarchy heads used in this survey:

SOCIAL APPROVAL:

- Sent to headmaster for school stamp
- Child receives a merit award at a school assembly
- Child receives a clap from the rest of the class
- Child takes a note written by teacher which acknowledges his achievement home to his parent
- Work presented by a child at a special school assembly "Best work day".
- Work given to another child group, to read
- Take story home for parents to read.

DISPLAY OF WORK:

- Work placed in class/school magazine
- Work displayed in school show case
- Work displayed on class 'Good Work' Display Board
- Work displayed in school library
- Story typed out by teacher and displayed
- Story taped by child and played back to class
- Work placed on Display Board of a senior class
- Have work put on display in 'Champions Corner'
- Have work displayed in public library.

CONTINGENT ACTIVITY:

- Allowed to play at an 'indoor game'
- Allowed to play on trampoline
- Allowed to do craft work
- Allowed to read a book/comics
- Allowed to 'colour-in'
- Allowed to go to the school library
- Allowed to ride skate-board during physical education period
- Allowed to draw on the blackboard
- Free time to work on a social-studies/nature-studies, project
- 'No homework' permits.

SPECIAL DUTIES:

- Allowed to set up physical-education equipment
- Allowed to plant tree/shrub/plants
- Blackboard monitor
- Allowed to tidy teacher's desk
- Given responsibility of caring for class pet
- Made 'This week's Messenger'.

TIME OFF:

- Allowed to go home early
- Allowed to go out to recess early
- 'Free Time Cards' - Allowed to do what they like for a specified time
- Recess time increased.

STATIONERY:

- Pencils, biros
- Rubbers
- Little books (note books)
- Pads, Diaries
- Rulers
- Pencil sharpeners
- A set of spirit-ink colours
- A pencil case with appropriate initials/and or a range of pencils.

STAMPS, STARS, TICKS:

- Receive an A Grade
- Use coloured shapes
- Place star by child's name on a class wall chart
- Place star on child's forehead
- Place star/stamp on child's hand
- Give a numerical mark

GIFTS:

- Small toys
- Jig-saw puzzles
- Books
- 'Treasure-Box' containing old toys, books, etc., supplied by class members
- Cash voucher for suitable book.

EDIBLES:

- Lollies
- Drinks
- Fruit
- Potato Chips
- Biscuits/Cakes
- A bag of mixed nuts.

## APPENDIX 5

## A LIST OF TEACHER COMMENTS

Following is a selection of comments offered by teacher sample members:

Teachers of Seven Year Olds:

1. Special class book is typed in large print and the children draw a picture in their favourite media.

2. The type of reward varies with each child as to the amount of success. Some children, especially more mature ones, appreciate getting work correct and receiving special jobs as incentives. However immature, less successful children appreciate direct, personal teacher-oriented rewards and food prizes.

3. If children know that their stories will be 'used' for a meaningful purpose they will enjoy writing a lot more.

4. Children enjoy having their stories displayed in a way appropriate to the topic, e.g., stories on round paper and put into a bag for "I am a 10c. coin:" stories put onto a toadstool for a 'magic circle' story.

5. Seems as though group class or school approval of child's effort ranks very highly. The fact that a teacher or headmaster has shown approval gives only slight incentive compared with approval from their peers.

6. Children enjoy verbal praise, especially when their friends can hear it.

7. Each day all marked stories are stapled together into a "Class Book", titled, dated and displayed at the back of the room. Stories are written on loose sheets. Children ask for words they don't know, they are printed in red biro in an 'inch-wide' margin. Children take a pride in completing more than two pages and in having few words in their margins.

8. A "SUPER SENTENCE" board in the class on which the 'best sentences' from stories to be displayed is used.

9. Good sentences or words are sometimes underlined in colour or read aloud to children during marking.

10. If a stamp or similar reinforcement is given only when a child has done his best, it becomes very meaningful.

11. Typing of the story in a large print (Junior) type to be placed on a school notice board or behind glass in a showcase in the school library or resource centre is very effective.

12. Usually the illustration of a story by seven year old pupils plays an important part whereas a ten year old will have developed more advanced writing techniques and the actual story content becomes more satisfying.

Teachers of Ten Year Olds:

1. Pupils appreciate most reinforcement practices whereby their peers are aware of their success.

2. Corrected stories are rewritten and placed into a STORIES book.

3. Pupils are allowed to illustrate good stories.

4. A classroom display is made of good stories.

5. A collection of GOOD phrases is pinned up on the class display board.

6. Children are allowed to select from a LUCKY-DIP BOX as a reward.

7. A Honour Certificate is awarded for big improvement in standards of work rather than to the child who consistently produces a good effort.

8. Writing a 'good story' is a personal thing so rewards should be of that kind; i.e. Praise and pleasure expressed in their work.

9. Depends on the individual child to some extent; e.g., while some children would delight in reading their stories out aloud others would be embarrassed and would require an alternative reward.

10. Bring to the notice of the rest of the class "Gems of Expression."

11. Children gain satisfaction from having their work presented in a format beyond their 'childhood-realm'. An adult treatment of their stories gives a degree of recognition on a par with other media e.g., T.V.